MEDICAL INNOVATION
BLOOMS IN GLOBAL STARTUP CITIES

Under a new growth strategy aiming at realizing a science and technology nation, efforts are now underway across Japan to accelerate the practical application of innovative technologies. Kobe City in Hyogo Prefecture is one example of a municipality making full use of its local strengths to support the promising startups that can help resolve global challenges, in medicine and beyond.

Strain on medical institutions, healthcare providers at risk of infection, a shortage of intensive care specialists—such latent issues lurking at the frontlines of healthcare have been exposed to the world by the COVID-19 pandemic. A service provided by a Japanese startup, T-ICU, has the potential to solve many of these problems simultaneously. Through a unique remote monitoring system combining a high-performance camera capable of 360-degree photography in full HD resolution with a monitor screen displaying vital signs, a patient's condition can be grasped in detail by a specialist for remote diagnostics and advice.

One core concept of the Japan's growth strategy is to generate such innovative startups in order to drive the development of technologies that can solve global problems. This year has been set as the first year for founding startups, with the goal to build ecosystems that link entrepreneurs, universities, and financial and public institutions so as to get them off the ground.

Some local governments have already formed such ecosystems that fully utilize the features of their communities. The city of Kobe in Hyogo Prefecture is a pioneer in this initiative, providing a wide range of support to promising startups, from financial assistance at the time of company establishment to the development of a business model. "We will continue aiming to attract business incubators that offer support from the idea stage to commercialization, as well as to expand the entrepreneur base, including students, and put a mechanism in place that will ensure the continuous generation of startups in Kobe," says TAKEDA Taku, the city's director of the New Business Promotion Division.

With a population of approximately 1.5 million, Kobe City has flourished as a major Japanese trading port for many years, and is set to continue attracting promising human resources and businesses, both from within Japan and abroad, and to support 1,000 startups by fiscal year 2025.

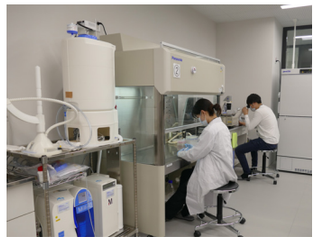
T-ICU's remote ICU service uses high-performance cameras installed in each patient's room for detailed monitoring of the patient's condition, complexion, and breathing. That reduces the number of actual visits doctors and nurses must make. In addition, a specialist can offer 24-hour remote support to the on-site doctor by viewing, in real time, a vital sign monitor connected to other medical devices, such as respirators.
JINAIKAI, URASOE GENERAL HOSPITAL

T-ICU opened its office in the Kobe Biomedical Innovation Cluster in 2019. "Thanks to the concentration of medical institutes and organizations, vast knowledge and profound intelligence have also come together here. Such a situation makes it easy to develop the horizontal connections that enable access to the necessary information and specialists," says NAKANISHI Tomoyuki, the company's CEO.

In 2020, T-ICU launched a COVID-19 response project in collaboration with a designated medical institution for infectious disease located in this biomedical hub, remotely connecting 9 hospitals citywide. Through its systems, installed in these hospitals, specialists provide advice on treatment plans and the need for hospital transfers. "The city's general medical institutions are now confidently able to provide patients with infectious disease-related care, enabling critical-care facilities to focus on severely ill patients, which in turn helps prevent a collapse of the healthcare system at times of peak infection rates," says Nakanishi. The company also plans to expand its business overseas by providing remote training for doctors and nurses engaged in intensive care in developing countries.

With its eyes on the global business development of startups, Kobe has been cultivating talent and businesses by bringing in global accelerator programs and international organizations. Projects have already turned out numerous, growing companies by working in partnership with the United Nations Office for Project Services' S3i Innovation Centre and 500 Global, a Silicon Valley venture capital firm. Many requests for participation in these projects are coming from outside Japan and, as befits a city that is one of the country's leading international ports, Kobe welcomes this trend. "By supporting open mindsets and global perspectives, we hope to create a future in which young people ready to take on new challenges will naturally gather here, with the expectation that 'in Kobe, you can create something new'", says Takeda.

Utilizing the world's cutting-edge ideas and talent pool, the country continues to move toward a future where both the startups of the world and its own can grow.



Right: The Kobe Biomedical Innovation Cluster is focusing its efforts on supporting the commercialization of R&D seeds. "Startup Creative Lab" (photo), for example, is an incubation facility for startups in the life science field.
Bottom: Participants in the 500 KOBE ACCELERATOR program the city implemented in collaboration with 500 Global, a Silicon Valley venture capital firm.